OIPE JC5F
MAY 10 2004
PATENT & TRADEMARK OFFICE

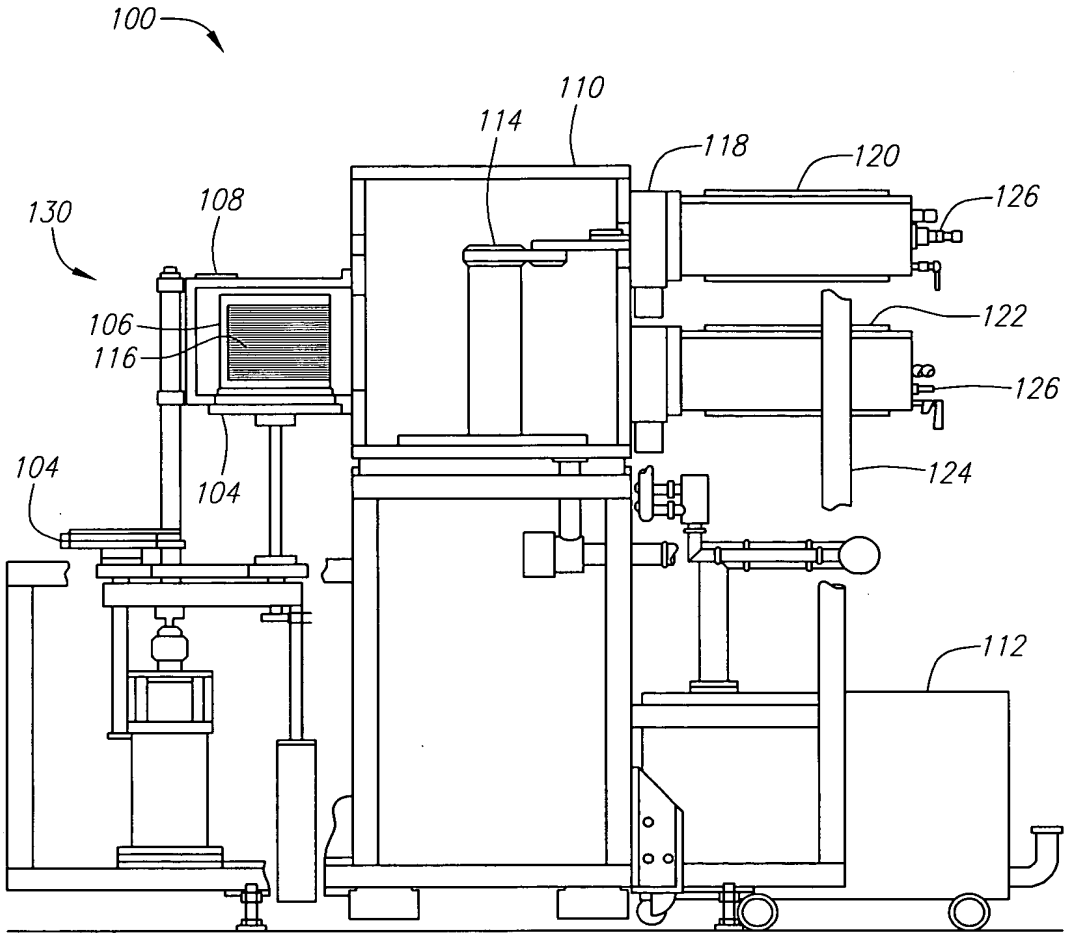

FIG. 1

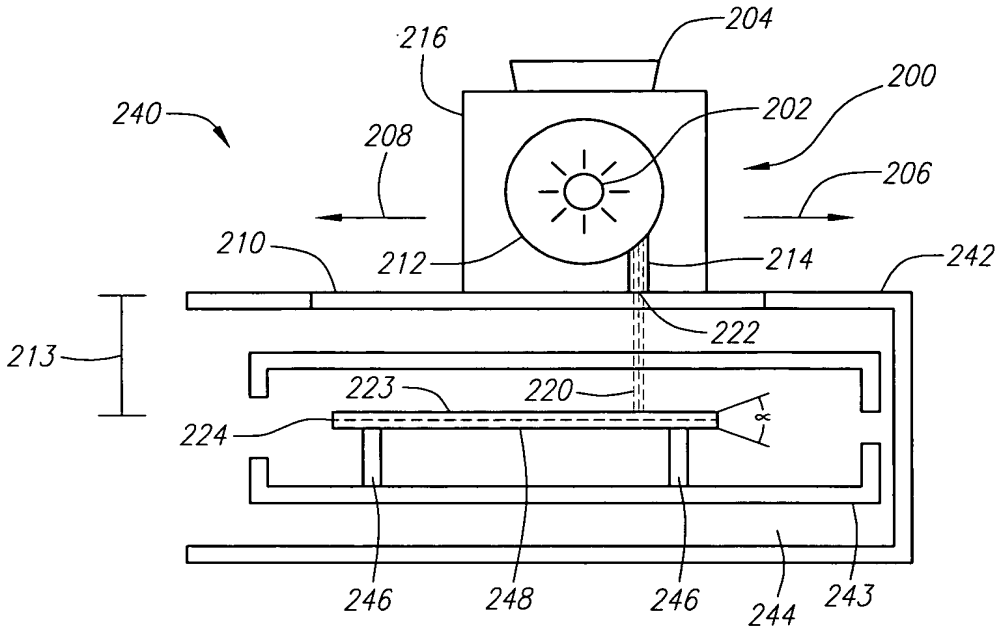
204
216
200
240
202
208
206
210
212
214
242
213
222
223
220
224
246
248
246
244
243

FIG. 2A

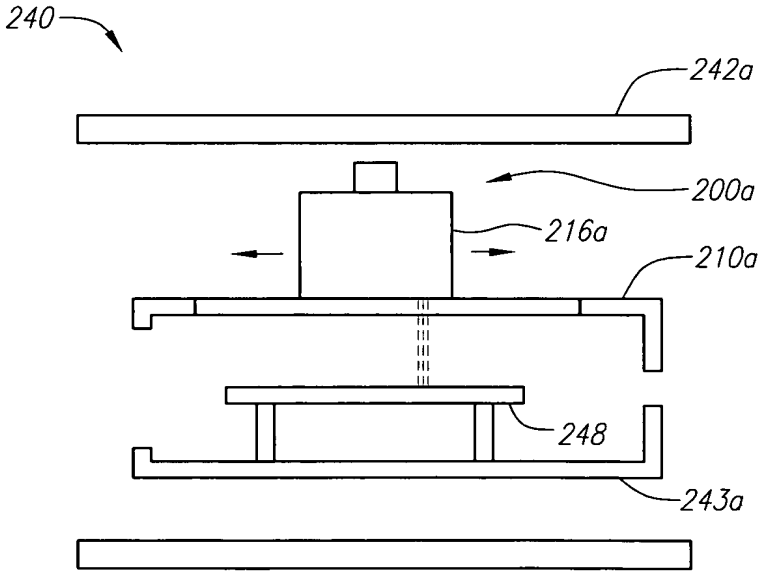
240
242a
200a
216a
210a
248
243a

FIG. 2B

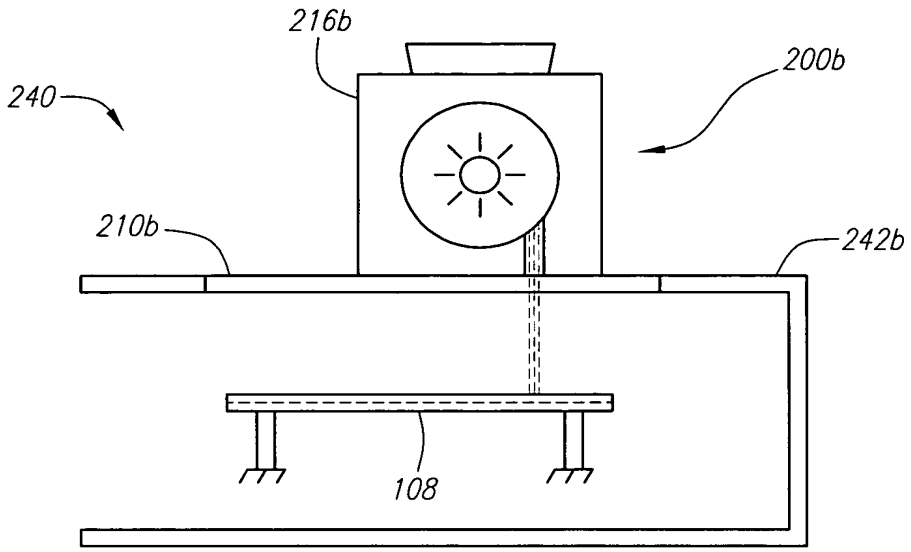

FIG. 2C

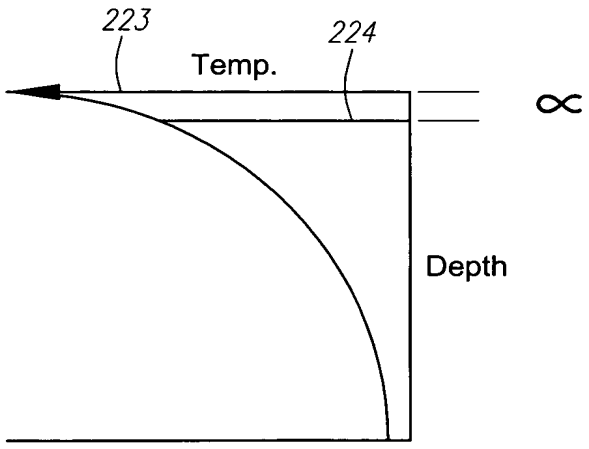

FIG. 2D

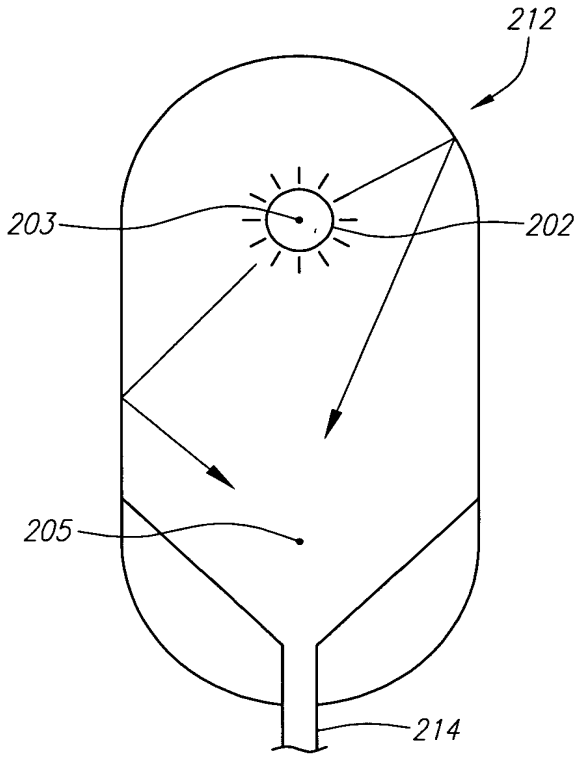
212
203
202
205
214

FIG. 3

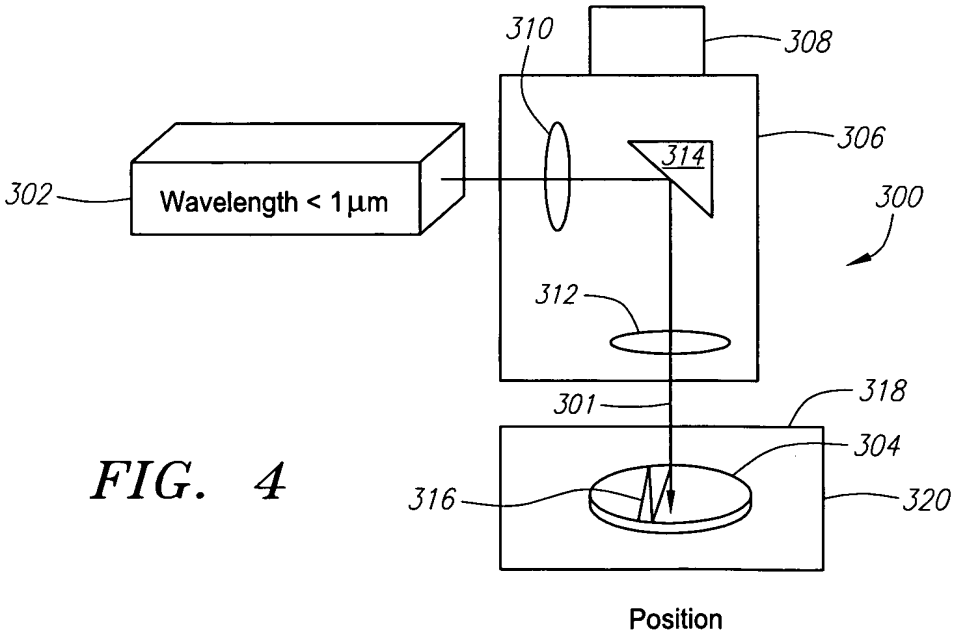
310
308
306
314
302
Wavelength < 1 μm
300
312
301
318
304
316
320
Position

FIG. 4

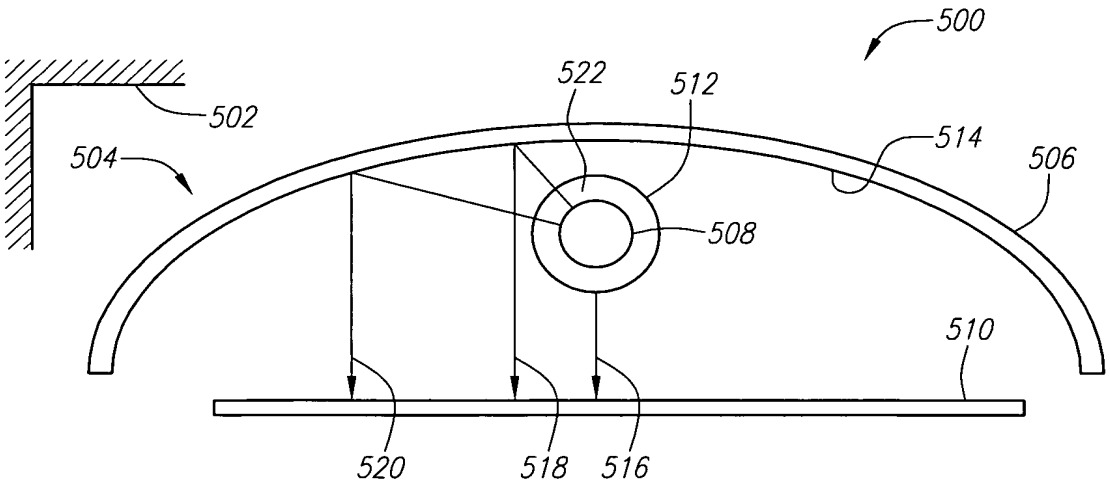
500
522
512
502
504
514
506
508
510
520
518
516

FIG. 5A

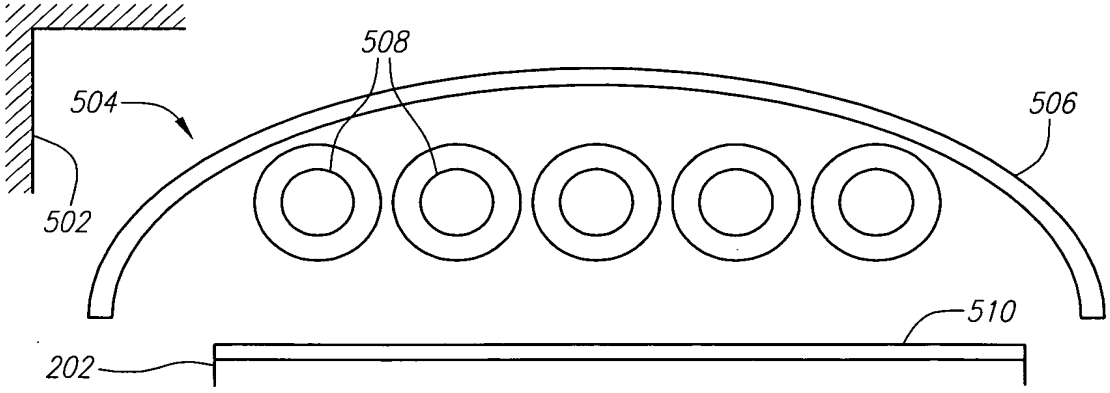
508
504
506
502
510
202

FIG. 5B

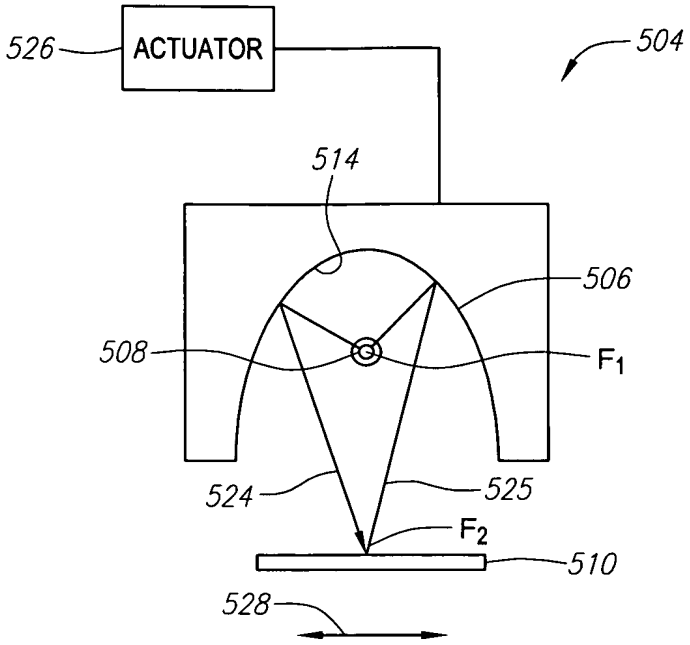
526
ACTUATOR
504
514
506
508
F_1
524
525
F_2
510
528

FIG. 6

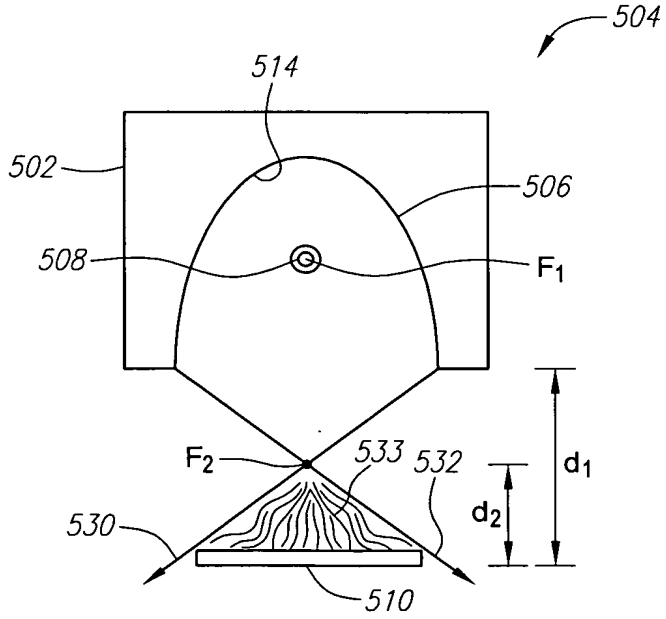
504
514
502
506
508
F_1
F_2
533
532
d_1
d_2
530
510

FIG. 7

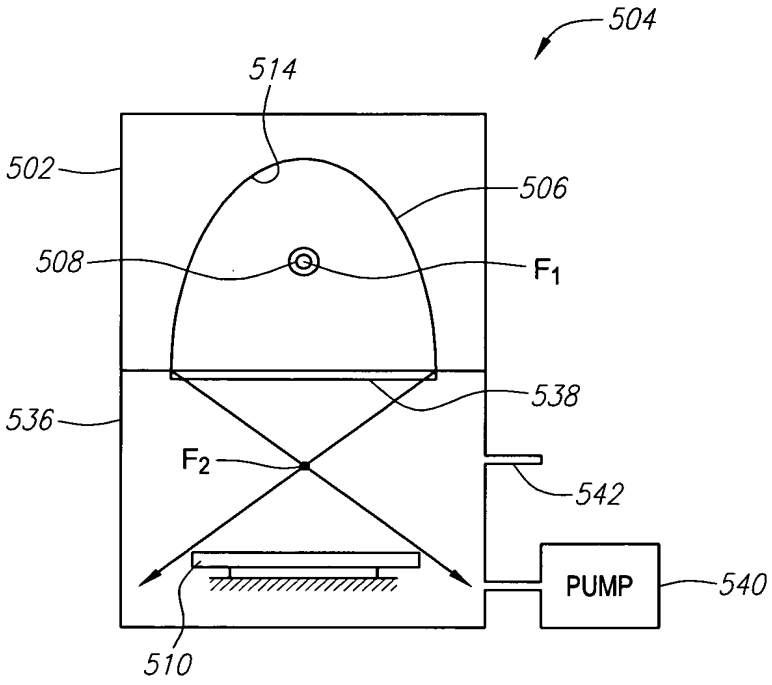

FIG. 8

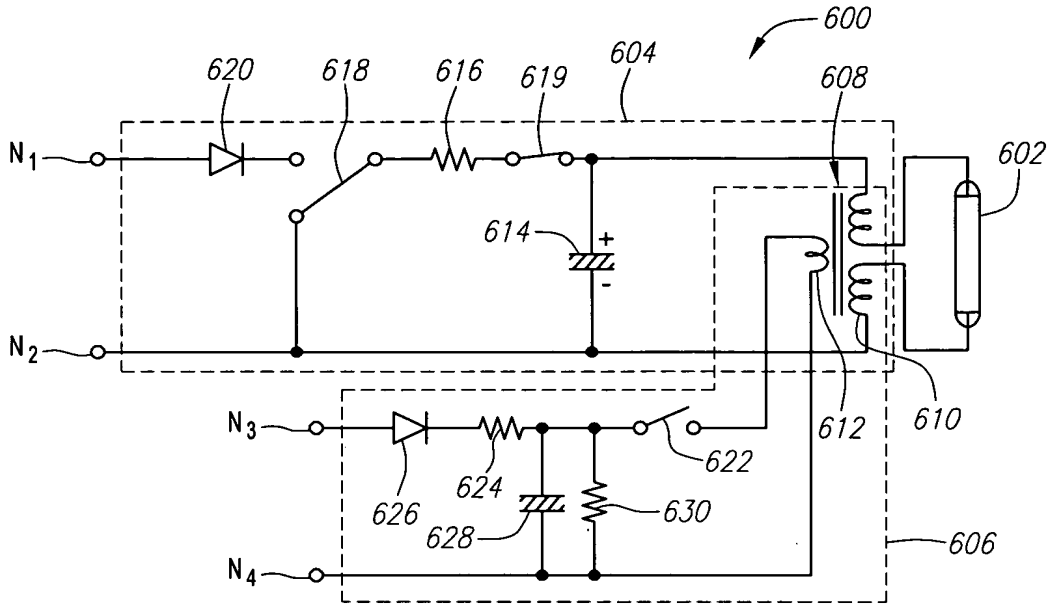
600
620
618
616
619
604
608
602
N1
N2
614
+
-
N3
N4
612
610
622
624
626
628
630
606

FIG. 9A

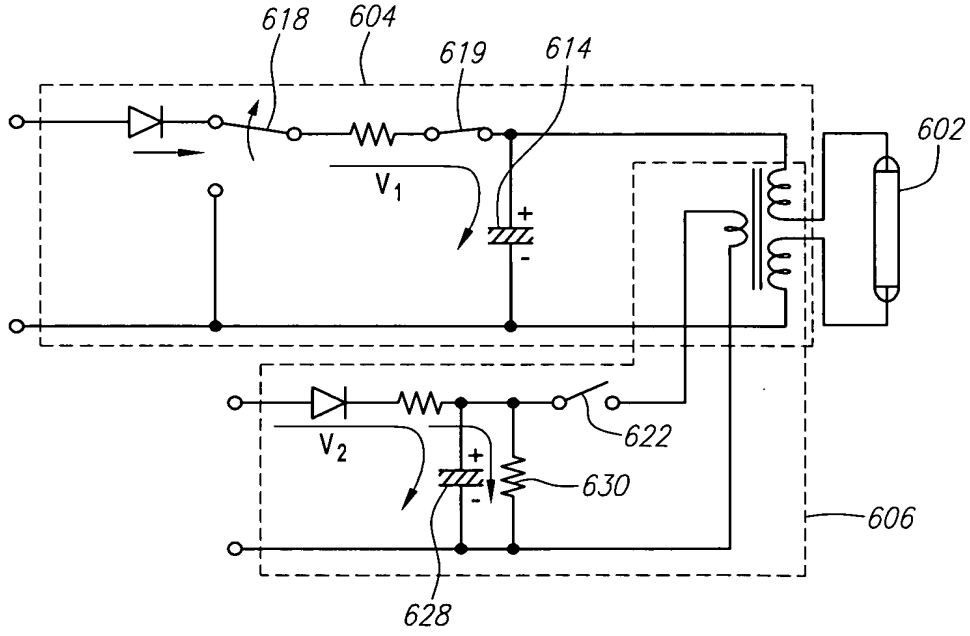
618
604
619
614
602
V1
+
-
622
V2
630
606
628

FIG. 9B

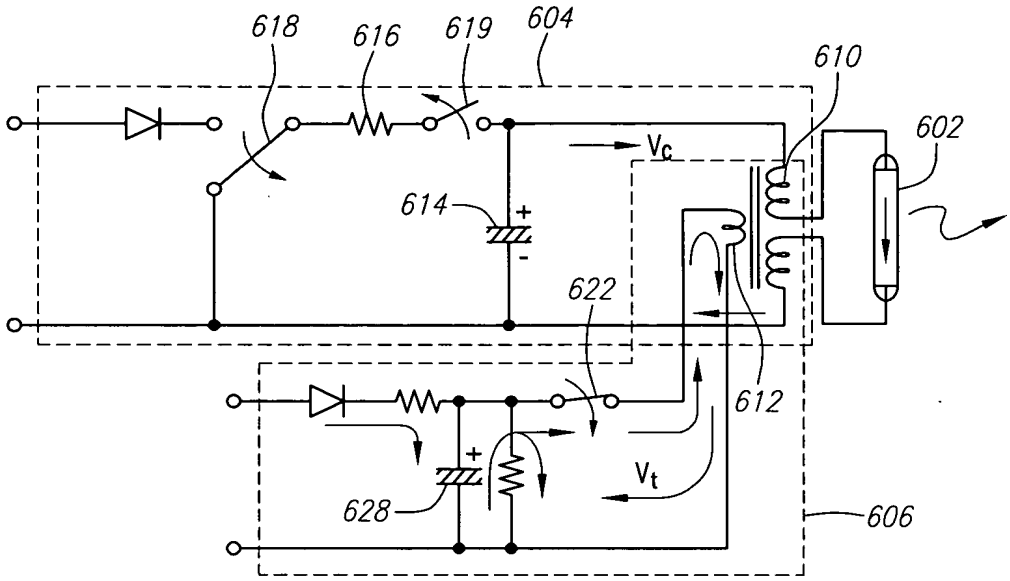
618
616
619
604
610
602
V_c
614
622
612
V_t
628
606

FIG. 9C

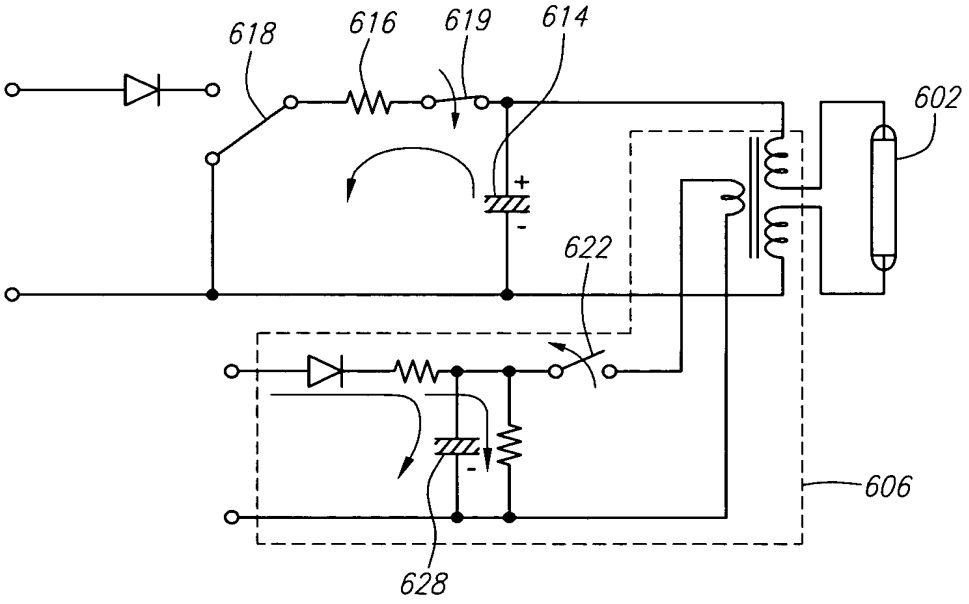
618
616
619
614
602
622
606
628

FIG. 9D

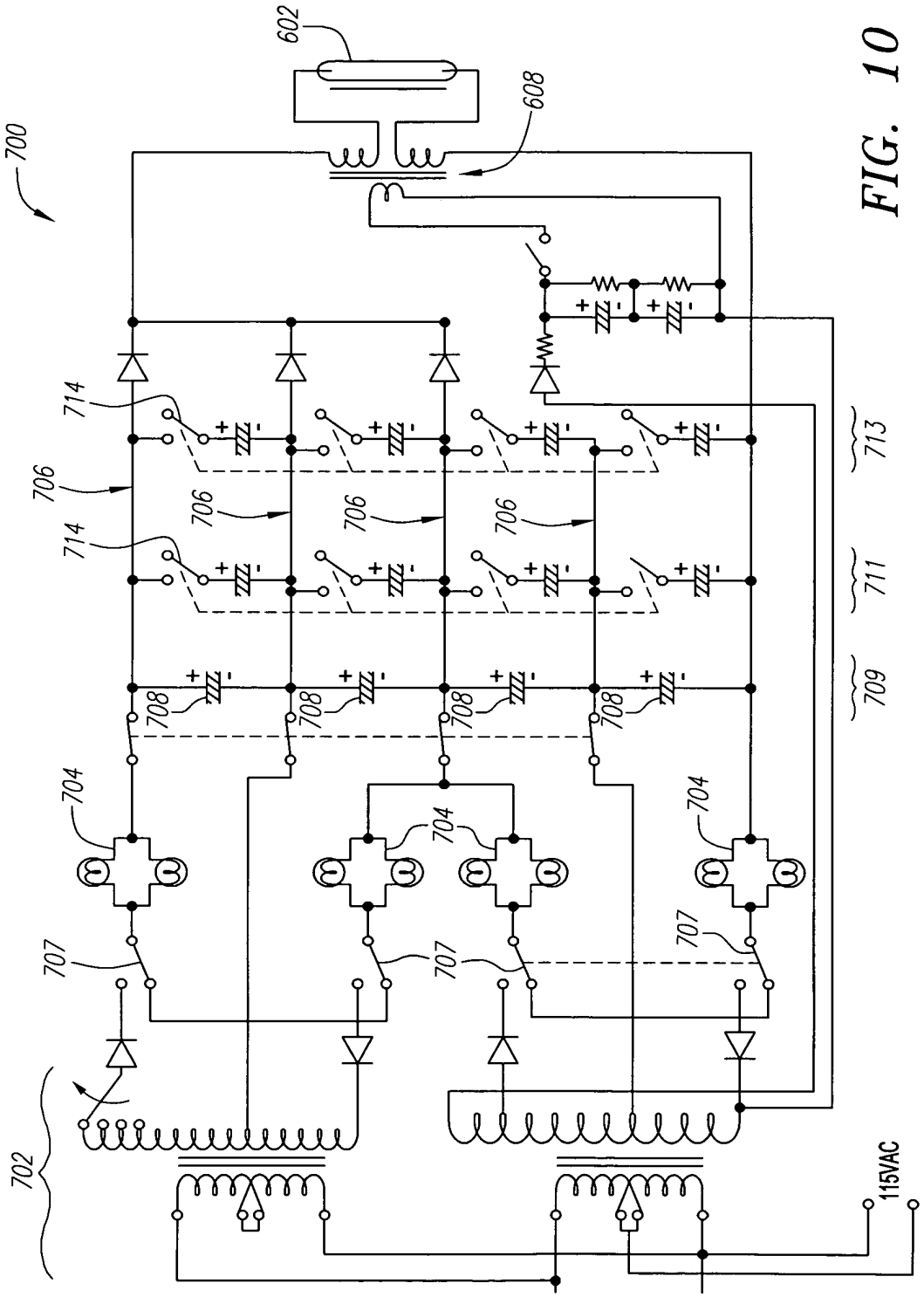

FIG. 10

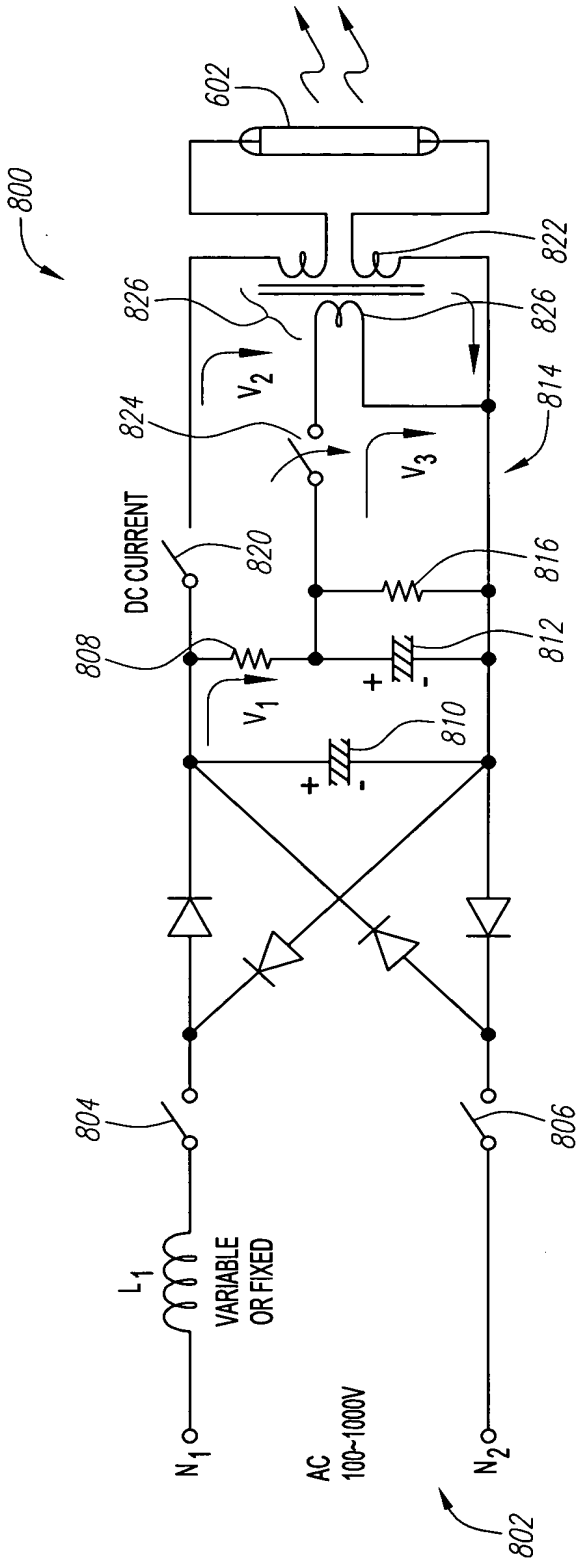
800
602
822
826
826
V_2
824
814
V_3
DC CURRENT
820
816
808
812
V_1
810
804
806
L_1
VARIABLE
OR FIXED
N_1
AC
100~1000V
N_2
802

FIG. 11

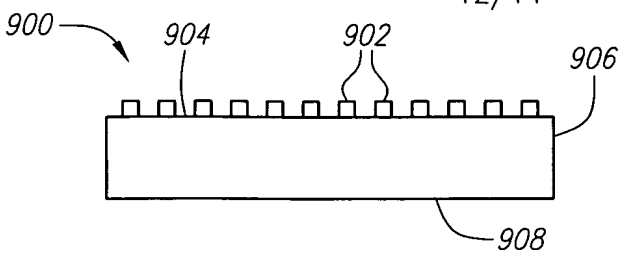

FIG. 12A

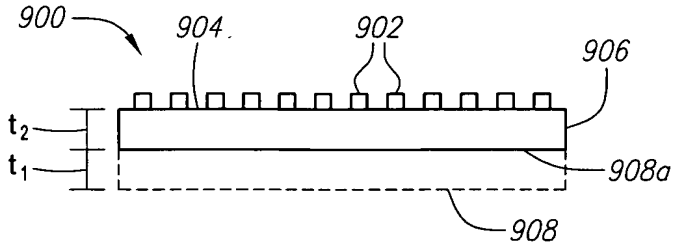

FIG. 12B

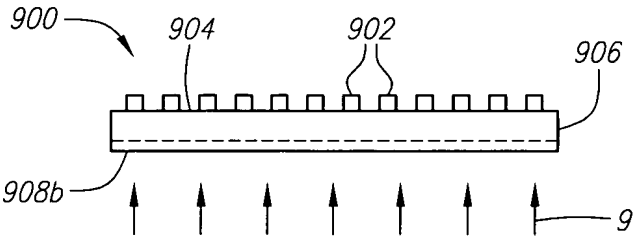

FIG. 12C

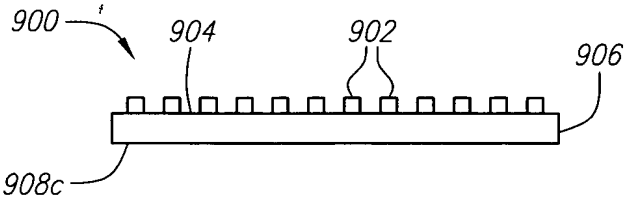

FIG. 12D

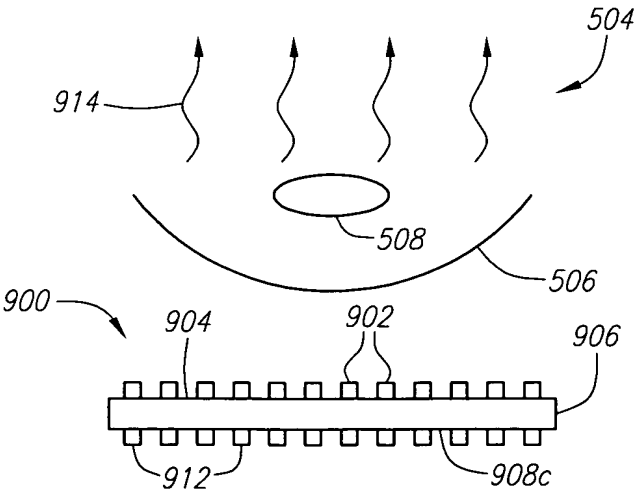

FIG. 12E

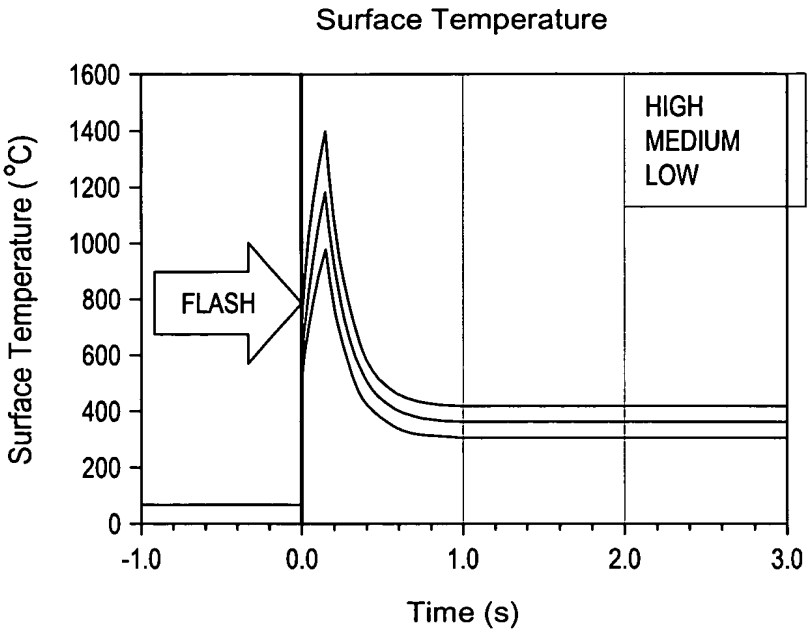

FIG. 13A

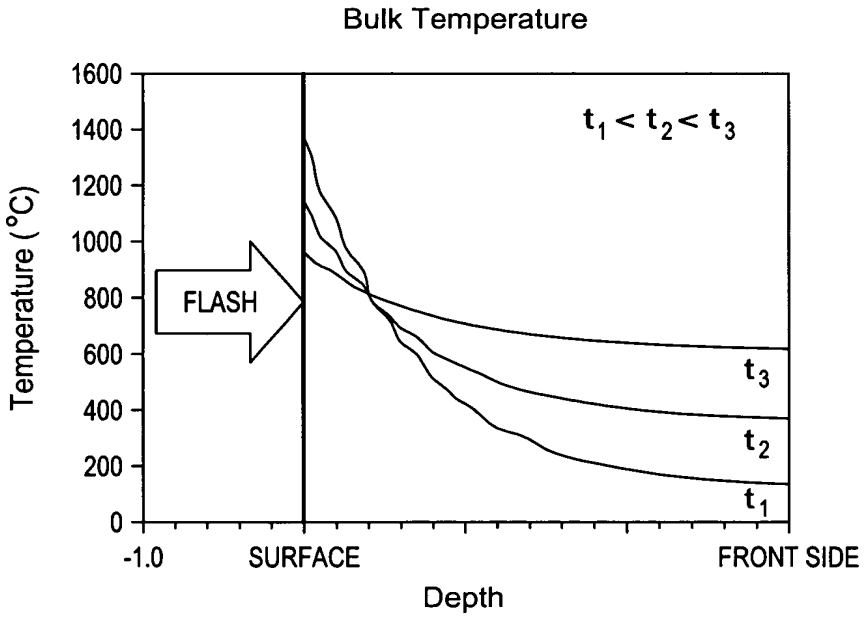

FIG. 13B

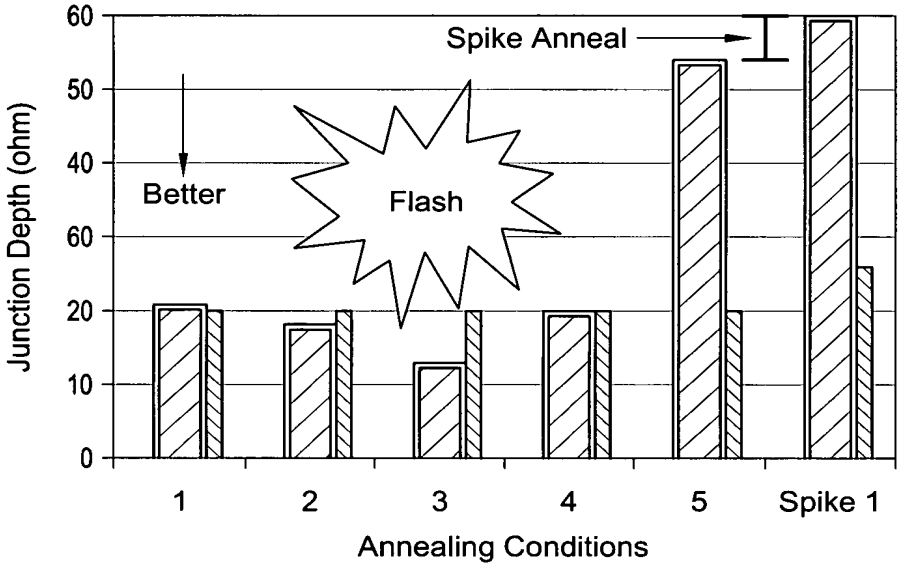
Spike Anneal
Better
Flash
Junction Depth (ohm)
60
50
40
60
20
10
0
1
2
3
4
5
Spike 1
Annealing Conditions

FIG. 14